Periscope

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1. Observations Concerning the Auditory Cortex of Human Brain. Paul Flechsig.
2. Periodicity in the Appearance of Nervous Symptoms. H. Oppenheim.
3. Paresis in Catholic Clergy. K. Pandy.

1. Continued article.

2. *Periodicity in Nervous Disease.*—Oppenheim cites several cases of organic nervous disease, most of them being syphilitic, in which the symptoms were divided into two classes—permanent and transitory. Among the former were pupil rigidity, hemiparesis, anesthesias, etc.

The transitory conditions were a variety of subjective symptoms, *e. g.*, headache, nausea, vomiting, lassitude, restlessness, insomnia, depression, vertigo, disturbances of vision and hearing. These appear and disappear with almost perfect regularity and generally the patient has continuous alternation of good and bad days—one day feeling perfectly well, the next suffering from many symptoms. Two facts are emphasized:

1. Stubbornness to treatment, especially to suggestion.
2. Symptoms correspond to an organic base and generally appear in patients showing signs or sequelæ of luetic infection.

Argument is made against the probability of the symptoms being hysterical, but that "there probably exists in the organization of the nervous system of certain individuals a *disposition* to periodical, rhythmical appearance of symptoms which remains latent until awakened by disease of brain. We have no clear conception of the origin of this, but see many analogies in the rhythm of sleeping and waking, the regularity of menstruation and in many forms of insanity and neuralgia."

3. *Paresis in Clergy.*—After a study of asylum records Pandy arrives at the conclusion that general paresis among Catholic clergy is not, as is commonly considered, a rarity, but is as frequently met with as among other callings, syphilis and dissipation being frequent in the histories of those affected.

(No. 2. January 16)

1. Observations Concerning Auditory Cortex. Paul Flechsig.
2. Tetany and Calcium Metabolism. W. Stoeltzner.

1. *Auditory Cortex.*—Flechsig considers the cortical auditory center to be the anterior transverse temporal convolution. His method of investigation is principally the myelogenetic, which he finds most efficient in following the fiber tracts. This method consists of the study of fetuses in different stages of development, noting order in which the tracts receive medullation, as these always follow a definite succession. In contrast to the cord in which the motor fibers are medullated before the sensory, in the sensory area of the cerebral cortex the corticopetal always precede the

corticofugal. In a fetus of 50 cm. long a medullated bundle appears extending from the internal capsule or lenticular nucleus to the anterior transverse temporal convolution (primary auditory project system). Arcuate fibers are not medullated at this time, but become so at about the maturity of the fetus, and it then becomes difficult or impossible to establish auditory radiation. So long as only auditory fibers are medullated the greater the number can be seen to enter the inner two thirds of the anterior transverse temporal convolution; the outer third contains fewer, and only a few isolated fibers go to the free-lying portion of the first temporal convolution. This tract can be traced downward directly to the region of the internal geniculate.

Corresponding results are obtained by secondary degeneration following destruction of the anterior transverse temporal convolution. This tract represents the upper tract in relation to the cochlear nerve. The course of the vestibular is doubtful. The difference in cortical topography of the right and left temporal regions is fairly constant and conditions are found reversed in the left-handed, while in three distinguished musicians both sides were almost equally developed. As to the structure of the cortex, there are certain characteristics as to number and thickness of layers, and the boundaries of the auditory cortex can be more sharply outlined in the new-born than in the adult, but this area cannot be as sharply mapped as the visual cortex. Large pyramidal cells appear early in the fourth layer similar to solitary cells of the visual cortex and post-central convolution. Cajals' special giant cells of the auditory cortex are too widely distributed over the temporal lobe to be characteristic.

Fibers of auditory radiations are interwoven and enter the cortex in an irregular tangled mass in contrast to comparatively regular parallel bundles of optic radiations. However, there is nothing distinctive in the histology of the auditory cortex by which it can be outlined.

Destruction of the right anterior transverse temporal convolution causes only slight disturbance of hearing in the left ear. Destruction of the left causes *word deafness,* usually permanent or nearly so.

Amnesic aphasia is absent in lesion of the anterior transverse temporal convolution, but lesion in the first temporal causes amnesia without word deafness.

Thus, according to the author, the common doctrine of aphasia needs revision in respect to localization of sensory aphasia.

2. *Calcium and Tetany.*—Stoeltzner defends his hypothesis that tetany is caused by excess of calcium in the body fluids. This excess may be brought about by inefficiency of excretion of calcium, and conditions favoring this are, on one side a large supply of calcium in the food, on the other a "negative balance" of the skeletal tissues. By his hypothesis he explains the predisposition to tetany of children with gastrointestinal disturbances and rickets; also the fact that many children do not develop tetany in spite of a rich amount of calcium, while others develop it with a small amount of calcium in the food.

The so-called "negative balance" of the skeletal tissues he describes as a condition in which more calcium is liberated from the bony tissues than is absorbed by the formation of new bone. This, with the calcium absorbed from the food, accumulates in the body fluids if elimination is insufficient and tetany results.

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